



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/500,926

03/11/2005

Dae-Hwan Kim

1592-4043

8948

27123 7590 10/11/2006

MORGAN & FINNEGAN, L.L.P.  
3 WORLD FINANCIAL CENTER  
NEW YORK, NY 10281-2101

EXAMINER

HAWK, NOAH CHANDLER

ART UNIT

PAPER NUMBER

3636

DATE MAILED: 10/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/500,926	Applicant(s) KIM, DAE-HWAN	
	Examiner Noah C. Hawk	Art Unit 3636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/8/04, 3/14/06, 6/1/05</u>                                   | 6) <input type="checkbox"/> Other: ____.                          |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "pyramid type roof, a slate (gable) type roof, a cross type roof, a cross-pyramid type roof and a modified cross-pyramid type roof" recited in Claim 2 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
2. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application: Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites the limitation "the roof end connection block" in line 24. There is insufficient antecedent basis for this limitation in the claim.

5. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The applicant does not clearly point out which of a "multiunit roof," a "single-roof multiunit" or a "double-roof multiunit" is being claimed. For the purposes of examination, the three types will be treated as patentably equivalent.

6. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase "are plastic injection structures, are welding structures according to the use thereof" renders the claim indefinite because it is unclear which of the two structures the applicant is claiming. The phrase "have rectangular, square, circular and oval shapes" renders the claim indefinite. The elements cannot have all of these shapes simultaneously. The applicant is directed to clarify the shape of the elements recited in the instant claim. The phrase "if necessary"

renders the claim indefinite. It is unclear if the applicant is claiming an open upper side of the block or not. The phrase "have an arm coupled via a column or cylindrical hinge shaft where a spline penetrating pin holes formed in the first and second rods of each of the blocks and a pin hole formed in the connection block, capable of pivoting" renders the claim indefinite. This phrase runs on and recites language without any discernable goal. Applicant is directed to clarify the phrase so as to plainly state the subject matter being claimed. For the purposes of examination, this phrase will not be given any patentable weight.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jang in US Patent 5794640 in view of Jang in US Patent 5944040. Jang '640 teaches a canopy comprising a plurality of pillars (1a-1d) an end connection block (10), a slide connection block (15), a plurality of roof edge frames (2a, 2b), a plurality of roof center frames (2c, 2d), a rod connection block (20), an upper head connection block (35), a lower head connection block (30) and a roof cloth (a "flexible covering" see Jang '640, Column 6, lines 10-13). Jang '640 fails to teach a connection block including a corner reinforcement bar. Jang '040 teaches a canopy framework having a corner

Art Unit: 3636

reinforcement bar (30) hinge coupled between a roof end connection block (60) and an upper head connection block (50). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the device of Jang '640 by adding a corner reinforcement bar as taught by Jang '040 in order to provide support for the cover along the diagonal corners of the framework and increase the interior space of the canopy.

9. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch in US Patent 5421356 in view of Jang '040.

a. Regarding Claim 1, Lynch teaches a canopy comprising a plurality of pillars (24) an end connection block (60), a slide connection block (62), a plurality of roof edge frames (29), a plurality of roof center frames (52), a rod connection block (64), an upper head connection block (66), a lower head connection block (67) and a roof cloth (22). Lynch fails to teach a connection block including a corner reinforcement bar. Jang '040 teaches a canopy framework having a corner reinforcement bar (30) hinge coupled between a roof end connection block (60) and an upper head connection block (50). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the device of Jang '640 by adding a corner reinforcement bar as taught by Jang '040 in order to provide support for the cover along the diagonal corners of the framework and increase the interior space of the canopy.

b. Regarding Claim 3, Lynch, as modified, further teaches a multiunit roof (see Lynch, Figure 2c and 1c) installed by further installing the pillars, the roof

edge frames and the roof center frames to form a plurality of the upper connection block and the lower head connection blocks.

10. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch, as modified, as applied to claim 1 above, and further in view of Carter in US Patent 6138702. Lynch, as modified, fails to teach that the roof center frames are longer than the roof edge frames. Carter teaches a canopy structure wherein the rod of the roof center frame (88) is longer than the rod of the roof edge frame (42) and the first rod (100) of the roof center frame is longer than the second rod (92) of the roof center frame. It would have been obvious to one of ordinary skill in the art at the time of invention to modify the device of Lynch, as modified, by using roof center frames that are longer than the roof edge frames and have a longer first rod than second rod in order to increase the space under the roof of the canopy.

11. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch, as modified, as applied to claim 1 above, and further in view of Surrendi in US Patent 4945936 and Jang in US Patent 6152157. Lynch, as modified, fails to teach that the slide connection block is injection molded. Surrendi teaches a connection block (\$) for a canopy structure, the block being injection molded plastic (see Surrendi, Column 16-19). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the device of Lynch, as modified, by using an injection molded slide connection block as taught by Surrendi in order to provide an easily manufactured and durable block member. Lynch, as modified, fails to teach a locking slide connection block. Jang '157 teaches a slide connection block (15) having a cylindrical rail (the tube

through which pin 140 slides), a slide key lever (140), an elastic spring (115) and a key lever handle (141) fixed to a screw hole (hole through which handle passes in the lever) in a side surface of the lever. It would have been obvious to one of ordinary skill in the art at the time of invention to modify the device of Lynch, as modified, by using a slide connection block as taught by Jang '157 in order to provide an easily and safely operable locking member for the slide connection block.

12. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jang, as modified, as applied to claim 1 above, and further in view of Surrendi. Jang, as modified, teaches that the connection blocks have square shapes (best seen, for example in Figure 3), have an open upper side if necessary (Best seen in Figures 3 and 4) have a fixing cap (200) at the end of the hinge shaft. Jang, as modified, fails to teach that the slide connection block, end portion connection block, rod connection blocks, upper and lower connection blocks are plastic injection molded. Surrendi teaches a connection block (4) for a canopy structure, the block being injection molded plastic (see Surrendi, Column 16-19). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the device of Jang, as modified, by using injection molded connection blocks as taught by Surrendi in order to provide an easily manufactured and durable block member.

13. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch, as modified, as applied to claim 1 above, and further in view of Glover et al. in US Patent 6516823. Lynch, as modified, fails to teach a ventilation opening or sunshield roof ribs. Glover teaches a canopy structure having a ventilation opening formed at a



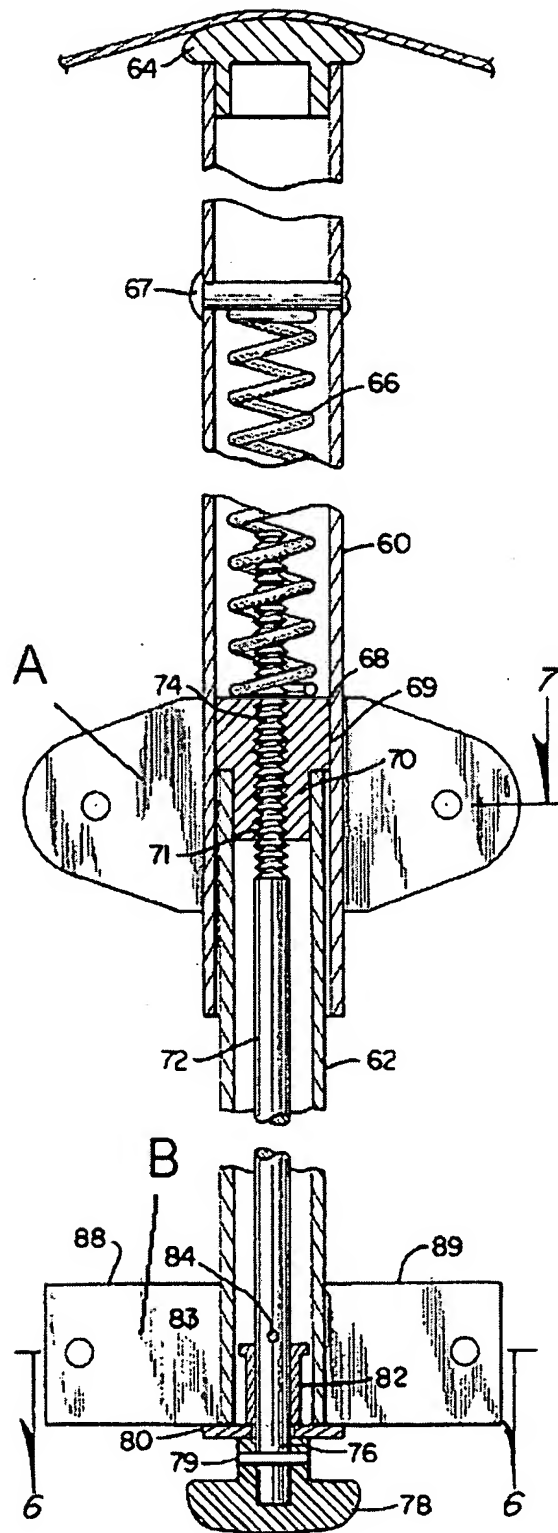
sharp center of the roof cloth (82), the upper head connection block (90) penetrating the ventilation opening to protrude upward, an additional double storied sunshield roof (166) where hinge type sunshield roof ribs (97) are formed is installed at the upper head connection block separated a predetermined distance from the ventilation opening.

Glover further teaches that the sunshield roof ribs comprise: radial sunshield roof ribs (131, 132, 133, 134) forming the sunshield roof; and hinge type sunshield roof ribs (127, 128, 129, 130) having one end portion pivoting at a center portion of the radial sunshield roof ribs or deviated from the center portion, sliding along the radial sunshield roof ribs, or fixed to the radial sunshield roof ribs capable of being folded by a hinge, and the other end portion pivoting the corner reinforcement bar (91, 92; 93, 94) and/or the second rod of the roof center frame. It would have been obvious to one of ordinary skill in the art at the time of invention to modify the device of Lynch, as modified, by adding a ventilation opening and sunshield roof as taught by Glover in order to provide a means for venting pressure from the underside of the canopy if the wind becomes heavy.

14. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch, as modified, as applied to claim 1 above, and further in view of Mallookis et al. in US Patent 5490532. Lynch, as modified, fails to teach an adjustable upper roof column. Mallookis teaches wherein an upper roof column (60) capable of sliding along the upper head connection block (A) is installed on the lower head connection block (B) by penetrating the upper head connection block, an elastic spring (66) is installed under the upper roof column and in a lower roof column to enable height adjustment by erecting the upper roof column, and a rotary handle (78) is installed on the lower head

Art Unit: 3636

connection block capable of freely rotating to adjust the displacement of the elastic spring and having one end portion penetrating the elastic spring and fixed to an end portion of the elastic spring capable of freely rotating and the other end portion capable of advancing and retreating by mean of a nut (68) and a screw (74) with respect to the lower head connection block during rotation. It would have been obvious to one of ordinary skill in the art at the time of invention to modify the device of Lynch, as modified, by using an adjustable upper roof column as taught by Mallookis et al., in order to provide "optimum tautness" and an "easily adjusted" tension (see Mallookis, Column 1, lines 55-58) in the cover.



Mallookis et al., Figure 5

15. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch, as modified, as applied to claim 1 above, and further in view of Suh in US Patent 6575656. Lynch, as modified, fails to teach a fixing block to connect the inner and outer pipes of the pillars. Suh teaches an adjustable pillar having an inner pipe (11) an outer block (12), a key lever (24) and a fixing block comprising a main body (40), a slide key lever (24), an elastic spring (32) and a key lever handle (25). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the device of Lynch, as modified, by using a fixing block arrangement as taught by Suh in order to provide a easily and safely operable locking member for the adjustable pillars.

#### ***Allowable Subject Matter***

16. Claims 4 and 6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Park et al. '032 teaches an adjustable upper roof column. Zeigler teaches a multi-unit roof structure.


Art Unit: 3636

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Noah C. Hawk whose telephone number is 571-272-1480. The examiner can normally be reached on M-F 9am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Cuomo can be reached on 571-272-6856. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NCH  
NCH  
9/22/06

  
Peter M. Cuomo  
Supervisory Patent Examiner  
Technology Center 3600